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Curriculum Vitae

Haruko Murakami Wainwright

CONTACT INFORMATION

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EDUCATION

Aug. 05–Dec.10: University of California-Berkeley, Dept. of Nuclear Engineering

Dec. 10: Ph.D. in Nuclear Engineering

(Advisors: Professor William E. Kastenberg and Professor Yoram Rubin)

May 10: M.A. in Statistics

Dec. 06: M.S. in Nuclear Engineering (Advisor: Professor Joonhong Ahn)

Mar. 04 –Aug. 05: Graduate School of Kyoto University, Dept. of Nuclear Engineering

(Advisor: Professor Hirotake Moriyama)

Apr. 99 – Mar. 03 Kyoto University (Kyoto, Japan), Dept. of Engineering Physics

Mar. 03: B.Eng. in Engineering Physics

PROFESSIONAL POSITIONS

Feb. 11 – Present: Lawrence Berkeley National Laboratory, postdoctoral fellow

Mar. 04 – Aug. 05: Argonne National Laboratory, visiting graduate student program

Jan. 04 – Mar. 04: Argonne National Laboratory, Japan Atomic Energy Society international student exchange program

Jul. 03 – Aug. 03: Japanese Atomic Energy Research Institute, graduate student traineeship

Sep. 02 – Oct. 02: Schlumberger-Doll Research, summer internship

AWARDS

- Student travel fellowship for the U.S. Department of Energy, Subsurface Biogeochemical Research 5th Annual PI Meeting, 2010

- Student travel fellowship for the U.S. Department of Energy, Environmental Remediation Science Program 4th Annual PI Meeting, 2009

- Roy G. Post Foundation Scholarship, 2009

- Jane-Lewis Fellowship, 2006-2007 and 2007-2008

- Japan Atomic Energy Society international student exchange program, 2004

PUBLICATIONS

- Chen, X., **H. Murakami**, M.S. Hahn, G. Hammond, M.L. Rockhold and Y. Rubin, "Bayesian geostatistical aquifer characterization at the Hanford 300 Area using tracer test data", submitted to Water Resour. Res.

- **Murakami, H**., X. Chen, M.S. Hahn, Y. Liu, M.L. Rockhold, V.R. Vermeul, J.M. Zachara, and Y. Rubin, "Bayesian approach for three-dimensional aquifer characterization at the Hanford 300 area", Hydrol. Earth Syst. Sci. Discuss., 7, 2017–2052, 2010.

- Rubin, Y., X. Chen, **H. Murakami**, M. Hahn, "A Bayesian approach for inverse modeling, data assimilation and conditional simulation of spatial random fields", Water Resour. Res., 46, W10523, doi:10.1029/2009WR008799.

- **Murakami, H.,** J. Ahn, "Development of compartment models with Markov-chain processes for radionuclide transport in repository region", Annals of Nuclear Energy, 38 (2-3), 511-519, 2010, doi: 10.1016/j.anucene.2010.09.013.

- **Murakami, H.** and J. Ahn, "Development of Compartment Models for Radionuclide Transport in Repository Region", Proceedings of the 12th International High-Level Radioactive Waste Management Conference, Las Vegas, Nevada, 2008.

- J. Li**, H. Murakami**, Y. Liu, P.E.A. Gomez, M. Gudipati, and M. Greiner, "Peak Cladding Temperature in a Spent Fuel Storage or Transportation Cask", Proceedings of the 15th International Symposium on the Packaging and Transportation of Radioactive Materials, PATRAM 2007

- I. Kanno, S. Hishiki, **H. Murakami**, O. Sugiura, Y. Murase, T. Nakamura, M. Katagiri, "Schottky and pn Junction Cryogenic Radiation Detectors Made of p-InSb Compound Semiconductor", Nucl.Inst.Meth.A **520,** page 93-95, 2004

PRESENTATIONS

- **Wainwright, H.M.**, D. Sassen, J. Chen and S.S. Hubbard, "Multiscale Hydrogeophysical Data Assimilation for Plume-scale Subsurface Characterization", AGU Fall Meeting H52C-06, San Francisco, December 2011.

- **Murakami, H.**, S. Finsterle, Q. Zhou and J.T. Birkholzer, "Uncertainty Quantification and Global Sensitivity Analysis of CO2 Migration and Pressure Buildup for a Hypothetical GCS Project in the Southern San Joaquin Basin in California", 11th Annual Conference on Carbon Capture Utilization & Sequestration, Pittsburgh, Pennsylvania, May 2011.

- **Murakami, H.**, X. Chen, M. Hahn, M. Over, M Rockhold, V Vermeul, G Hammond, J

Zachara and Yoram Rubin, “Sequential Bayesian Geostatistical Inversion and Evaluation of Combined Data Worth for Aquifer Characterization at the Hanford 300 Area”, AGU Fall Meeting, December 2010.

- Chen, X., **H. Murakami**, M. Hahn, G Hammond, M Rockhold and Y. Rubin, “Three-Dimensional Bayesian Geostatistical Aquifer Characterization at the Hanford 300 Area using Tracer Test Data”, AGU Fall Meeting, December 2010.

- **Murakami, H**., X. Chen, M.S. Hahn, M.L. Rockhold, V.R. Vermeul and Y. Rubin, “Bayesian Geostatistical Inversion Framework for Probabilistic Risk Assessments of Groundwater Contamination”, Japan Geoscience Union Meeting, Makuhari, Chiba, Japan, May 2010.

- **Murakami, H**., X. Chen, M.S. Hahn, Y. Liu, M.L. Rockhold, V.R. Vermeul, and Y. Rubin, “Stochastic Three-dimensional Aquifer Characterization at the Hanford 300 Area”, DOE-SBR 5th Annual PI Meeting, Washington D.C., March 2010.

- **Murakami, H.**, X. Chen, M.S. Hahn, Y. Liu, M.L. Rockhold, V.R. Vermeul, Y. Rubin, "Bayesian Geostatistical Inversion Framework for Characterizing Three-Dimensional Hydraulic Conductivity Field: An Application to the Hanford 300 Area", Waste Management symposia, Phoenix, Arizona, March 2010.

- Rubin, Y., F. de Barros, X. Chen, **H. Murakami**, M.S. Hahn, “Elements of a Comprehensive Approach for Modeling Uncertainty”, Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract H51N-01, December 2009.

- **Murakami, H.,** X. Chen, M.S. Hahn, Y. Liu, M.L. Rockhold, V.R. Vermeul, Y. Rubin, "Three-dimensional Characterization of A High-K Aquifer at the Hanford 300 Area and Retrospective Analysis of Experimental Designs", Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract H43F-1082, December 2009.

- Chen, X., **H. Murakami**, M.S. Hahn, M.L. Rockhold, V.R. Vermeul, Y. Rubin, "Integrating Tracer Test Data into Geostatistical Aquifer Characterization at the Hanford 300 Area", Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract H43F-1095, December 2009.

- **Murakami, H.,** X. Chen, H. Bai, M.L. Rockhold, V.R. Vermeul and Y. Rubin, "Integrating Scale-dependent Hydrogeological Data using a Bayesian Geostatistical Framework", DOE-ERSP 4th Annual PI Meeting, Lansdowne, Virginia, April 2009.

- **Murakami, H.** and Y. Rubin, "A Bayesian Geostatistical Inversion Method for Hydrogeological Data Integration in Probabilistic Risk Assessments", Waste Management symposia, Phoenix, Arizona, March 2009.

- **H. Murakami** and J. Ahn, “Development of Geologic Repository Models for Design and Decision Making”, 16th Pacific Basin Nuclear Conference, Aomori, Japan, 2008.

- H. Murakami and J. Ahn, “Compartment Model for a Geologic Repository with Stochastic Approach”, Transactions, 95, page 173-174, Winter Meeting, Albuquerque, NM, American Nuclear Society, November 2006.

LANGUAGES

Japanese (native), English (fluent), Chinese (intermediate level)

COMPUTER SKILLS

OS: Mac, Windows, Linux

Programming: R, MATLAB, Fortran (including parallel computing), Python

Numerical code: GSLIB, PFLOTRAN, STOMP, MCNP

Numerical Methods: finite-difference method, finite-element method and various statistical computing methods